



SVR306

Linux and Open Source: A Technical Perspective

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Microsoft Corporation

Microsoft®

Market Overview

IT Industry Trends

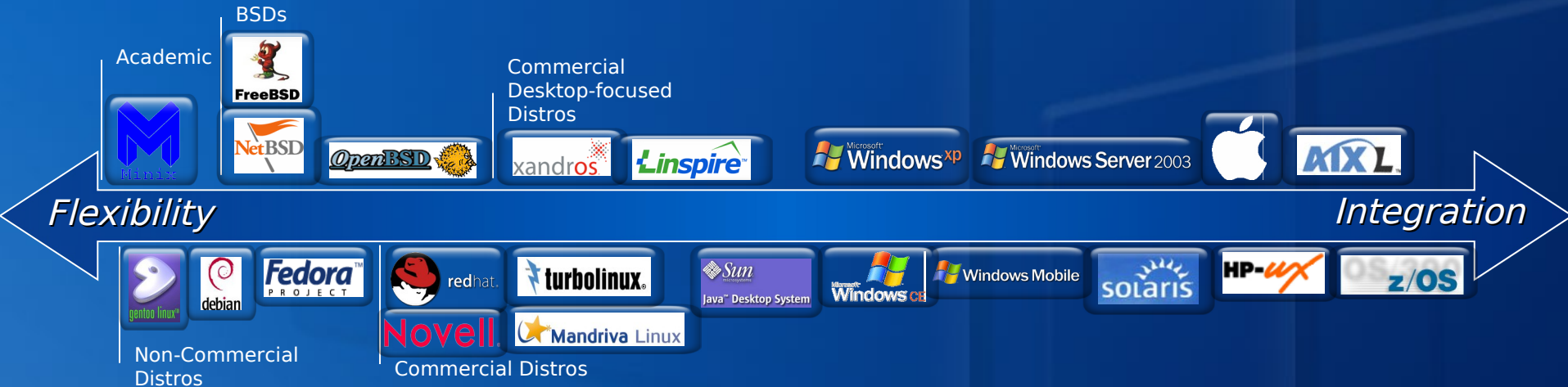
- Everyone agrees on one thing: the move to x86
 - Price/performance and flexibility driving change
 - x86 vendors realizing gains
- Focus on security
- Increasing pressures to do more with less
 - Clear lines between IT investment and Business Value
- Broad interoperability movement
- Competing at the Product level



Novell.

Microsoft®

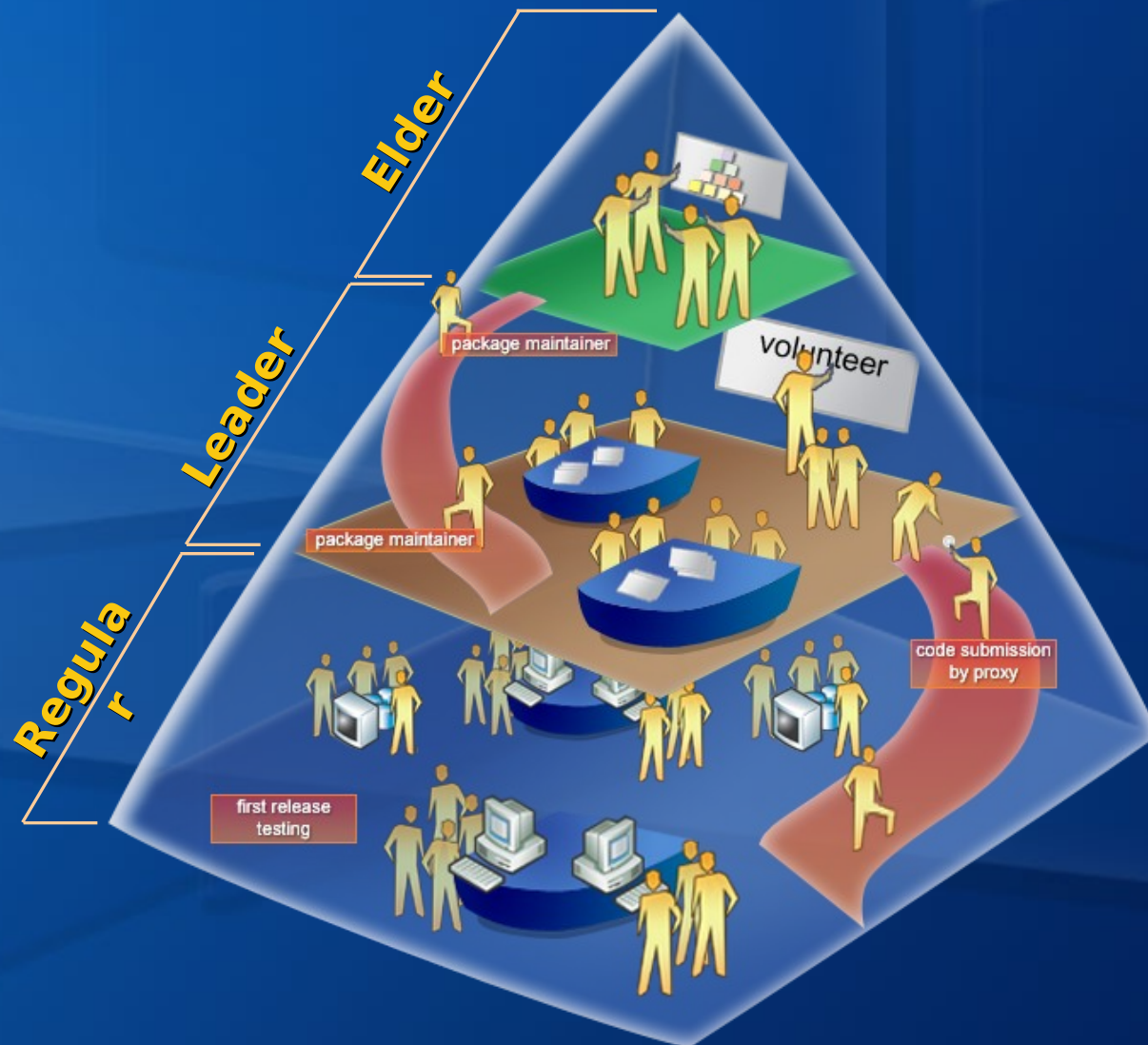
Operating System Trade Offs



- Customizable
- Arbitrary testing
- Decentralization
- Community or self support
- High degree of variance
- Rapid Release Cycle
- Stability decrease

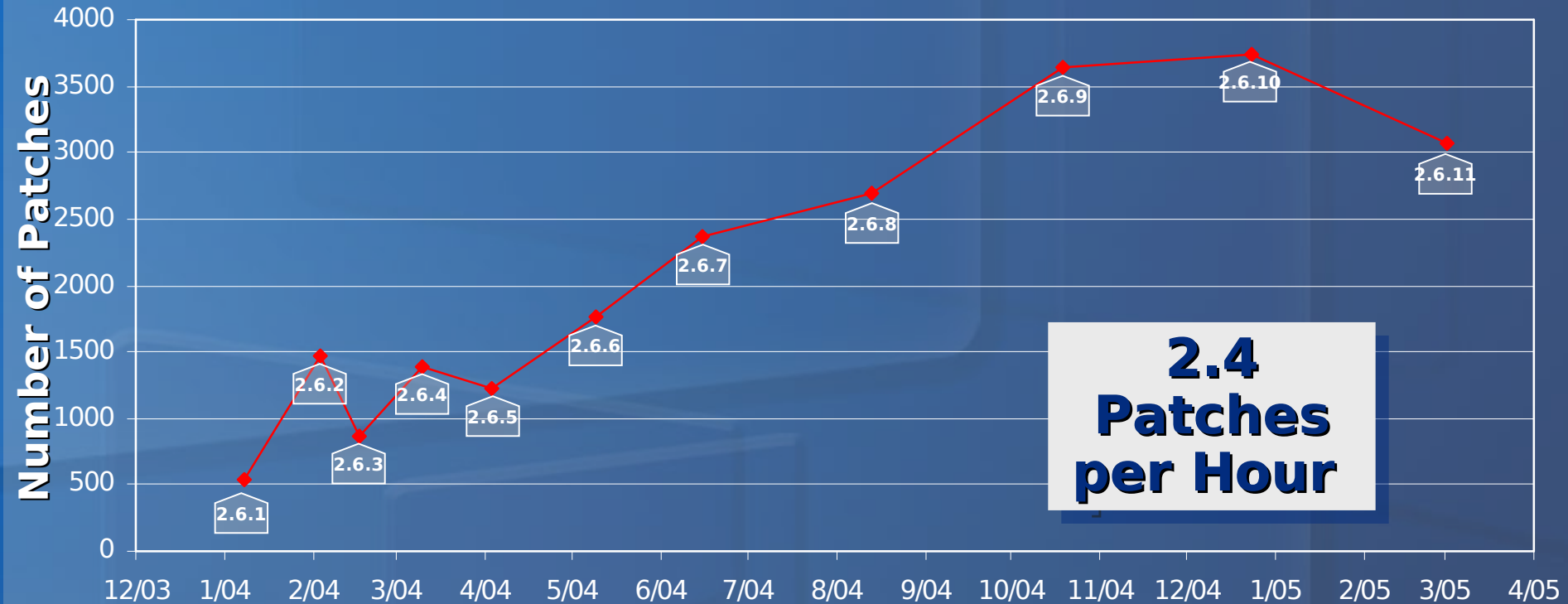
- Reduced Complexity
- Quality Assurance
- Centralization
- Commercial support
- Predictability
- Timed release
- Stability increase

How is Linux/Open Source Software (OSS) developed?



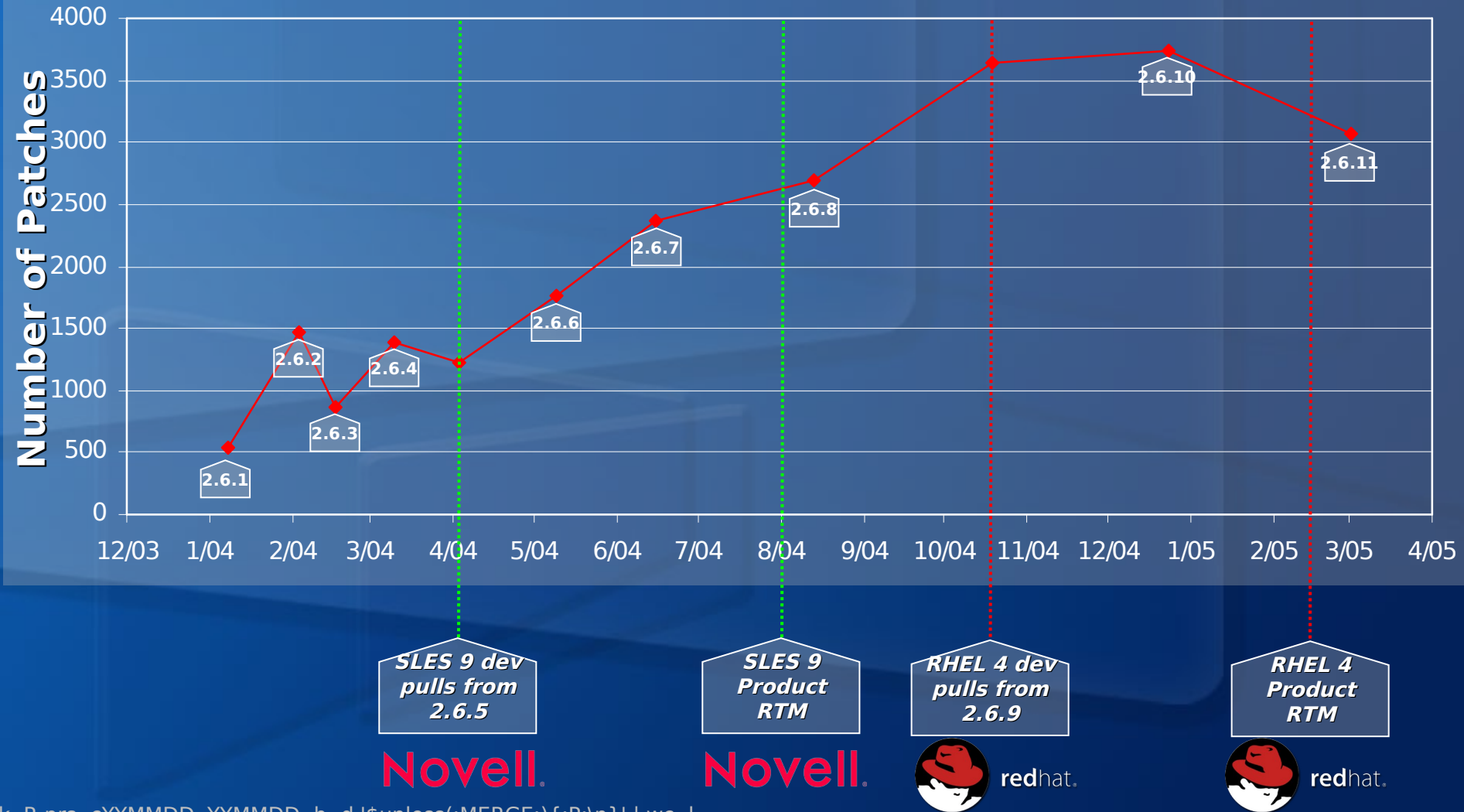
Kernel Development

2.6 Kernel Patches



Distribution Lag

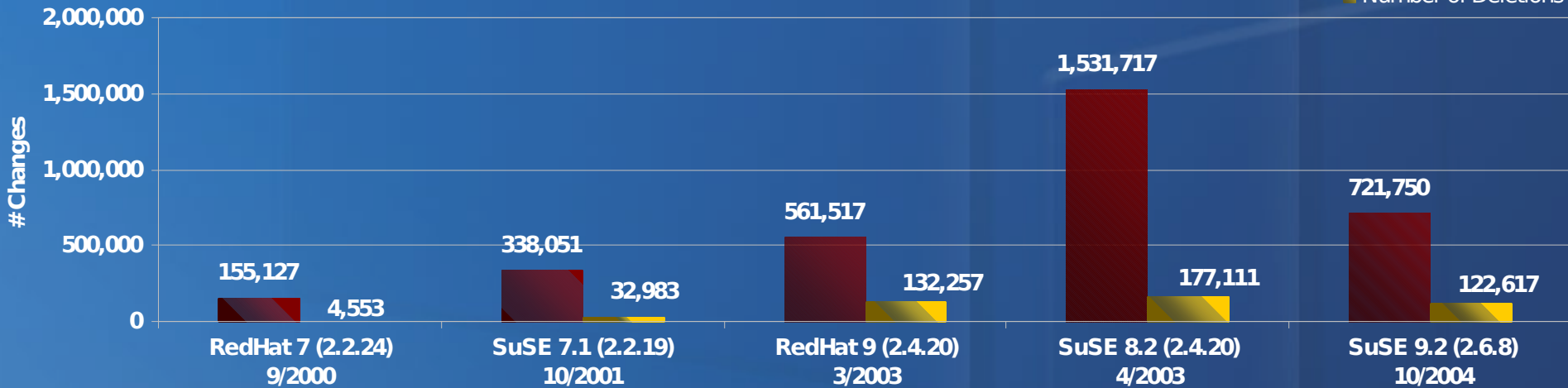
2.6 Kernel Patches



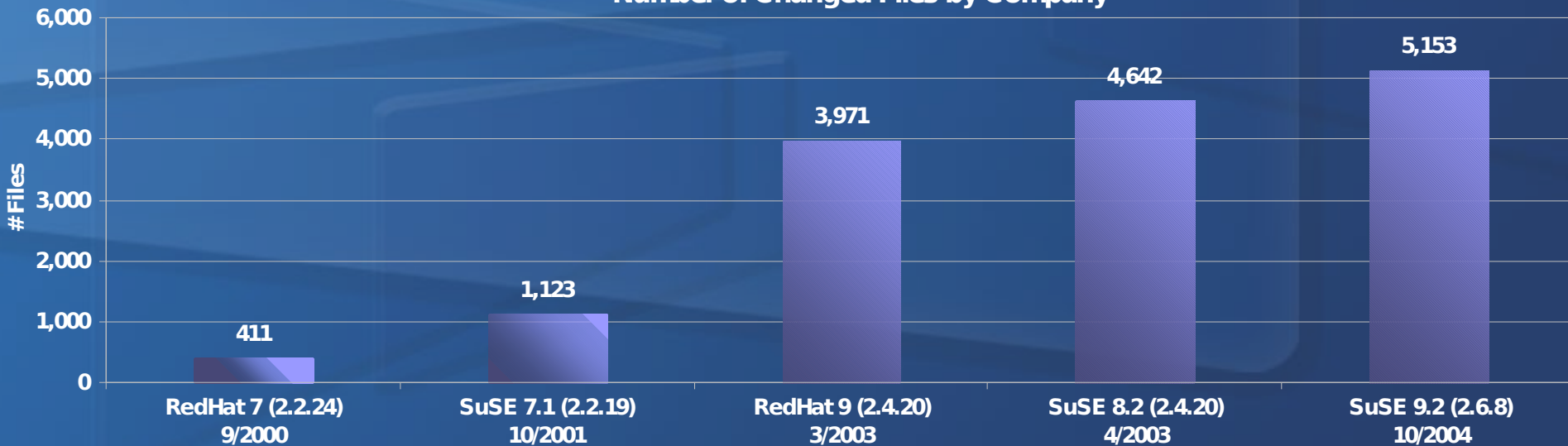
RedHat vs. SuSE

Modifications by Distribution

■ Number of Insertions
■ Number of Deletions



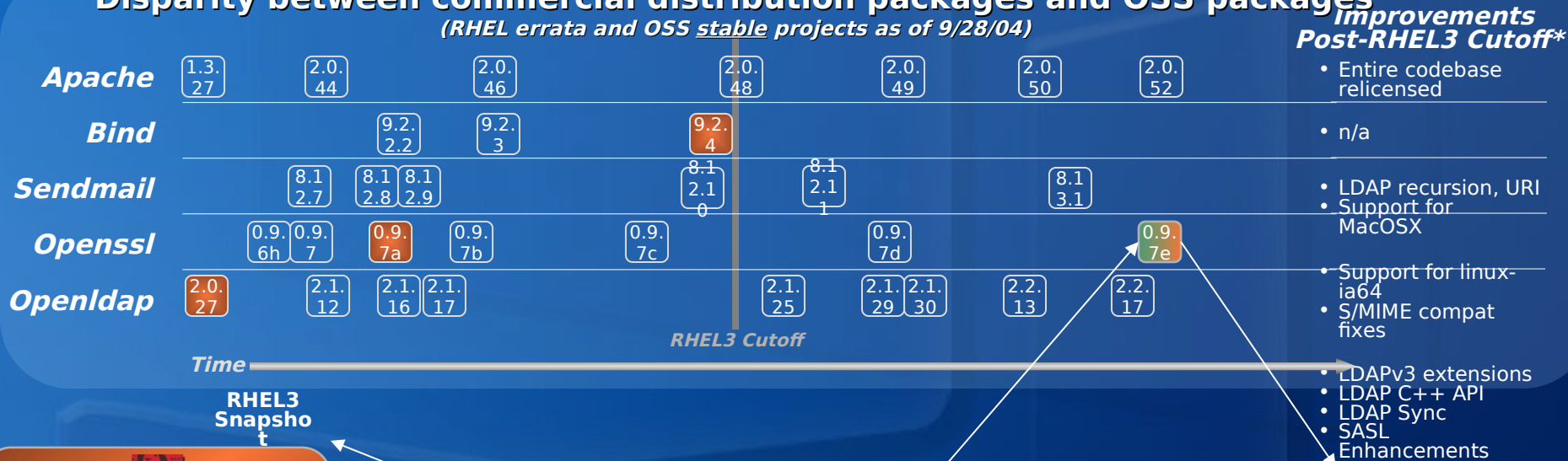
Number of Changed Files by Company



The community vs. commercial process

Disparity between commercial distribution packages and OSS packages

(RHEL errata and OSS stable projects as of 9/28/04)



Continue to use distro supported version, forgo new functionality



Install new functionality & assume support internally



Example:

- Customer wants latest version of Openssl
- Customer wants new functionality in the latest version of Openssl (0.9.7e)
- Learns distro does not support
- Decision: Install latest version with fixed S/MIME compat support or continue using distro supported version

How are bugs resolved?

RHEL3 = 677 packages
SLES9 = 1423 packages
SuSE Professional 9.1 = 1000 packages

Linux Distributions



Will you have support after the patch?

- “Technically you are running a forked product... It is unlikely that Red Hat will “Fully” support your system unless the bug is reproducible using the original (Red Hat Packaged) RPM files.”

Some patches are not accepted by the OSS community because:

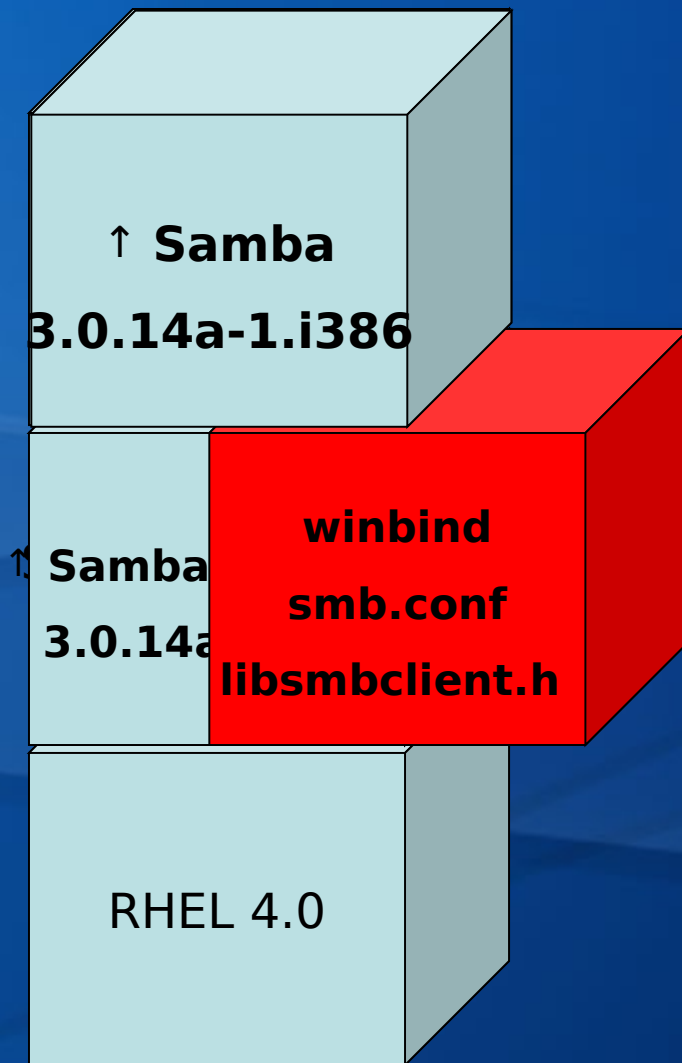
- Will break something else
- Community doesn't have time to resolve
- Unknown (no response!)

Some patches are accepted by the OSS community

Most importantly, the commercial

Stack Architecture Challenges

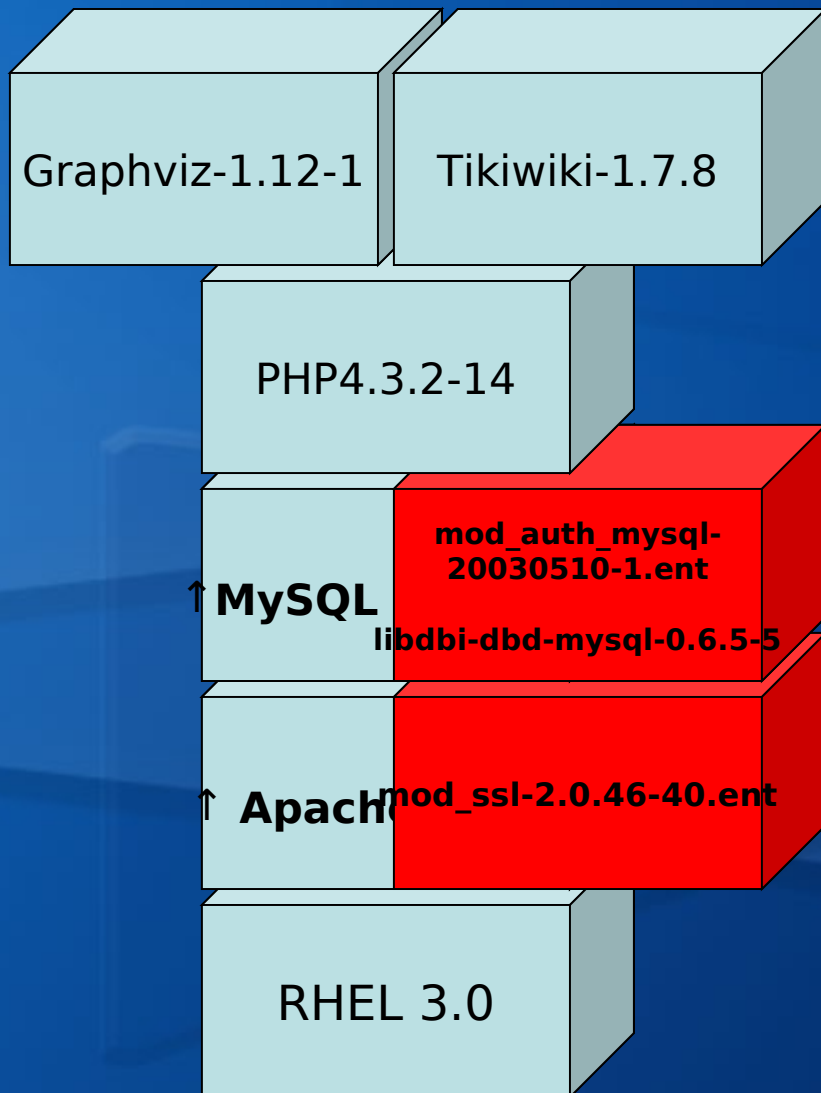
Example: Updating Samba on Red Hat Enterprise Linux Server Edition 4



- 1 Install Red Hat Enterprise Linux 4 with Samba Server
- 2 Customer downloads latest Samba packages from samba.org to fix:
 - MS-DFS errors with Windows XP SP2 clients.
 - High CPU loads caused by infinite loops in the FindNext server code.
- 3 Customer must upgrade Samba-common file before Samba Server
- 4 Package updates cause critical dependencies

Stack Architecture Challenges

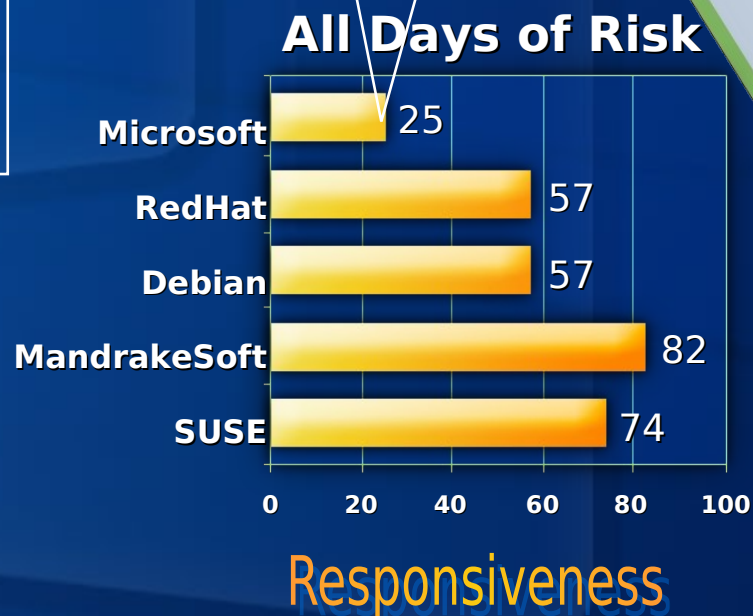
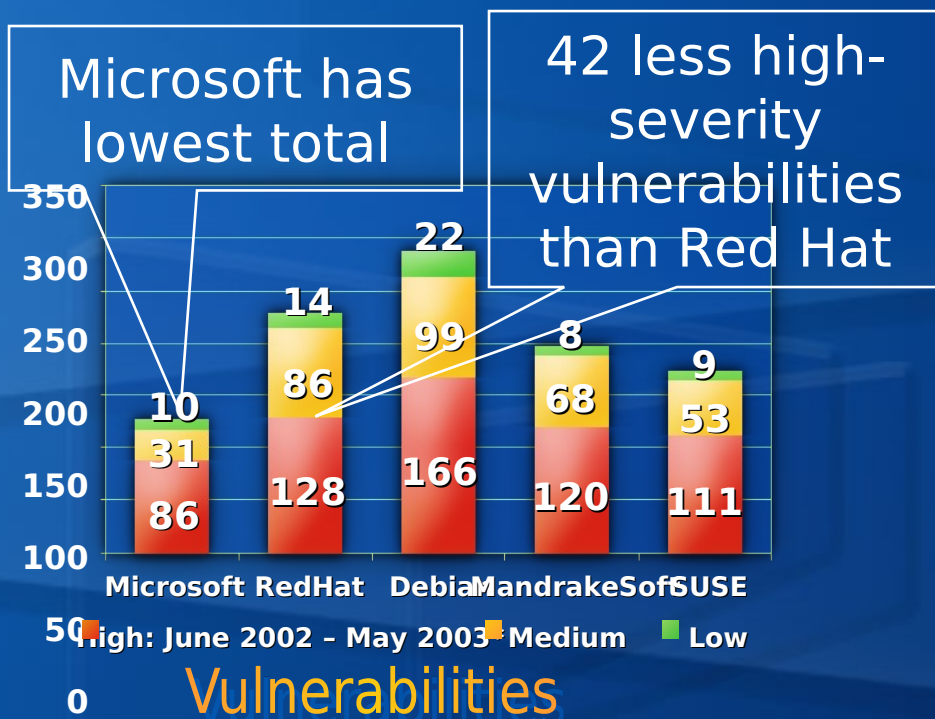
Example: Creating TikiWiki Collaboration Server with current web server and database



- 1 Install RHEL3 Out of Box & download supported upgrades
- 2 Add Tikiwiki & Graphviz
- 3 Customer requires updated capabilities vs. Out of Box versions
- 4 Package updates cause critical dependencies

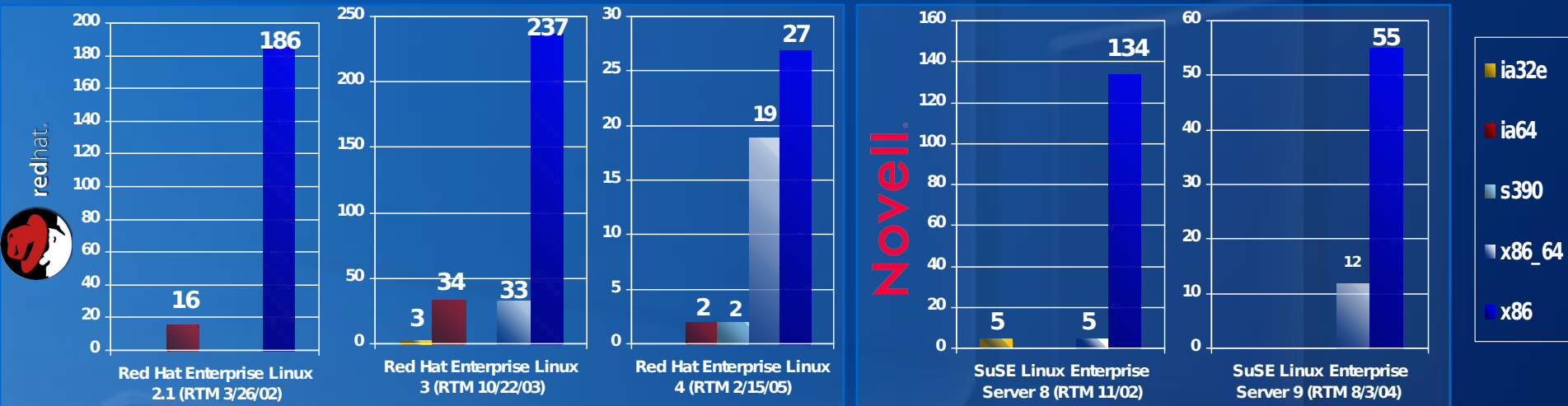
Security Quality

- Microsoft SDL is producing results
- Less total & high severity vulnerabilities
- Faster fixes for publicly disclosed issues

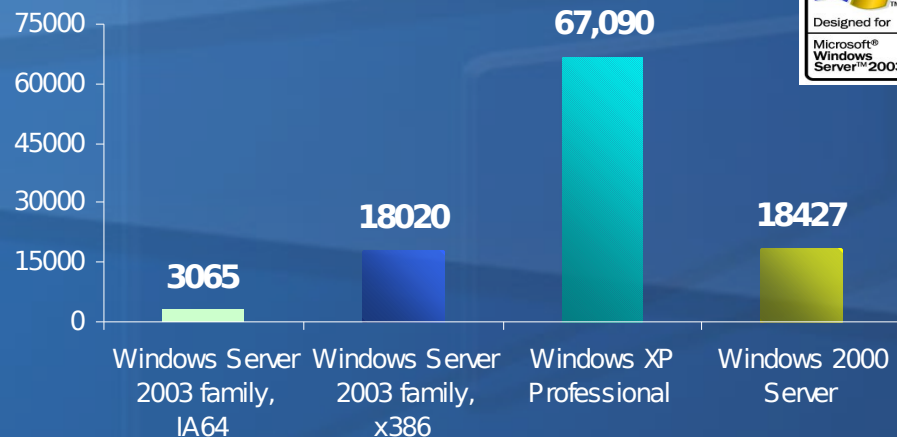


How do the hardware ecosystems compare?

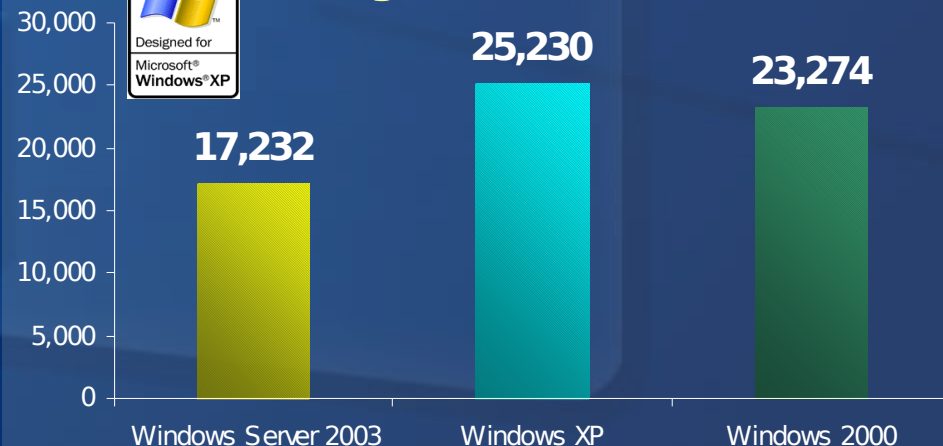
Linux - Total Certified Systems (Server)



Logo'd PC Servers & Systems



Logo'd Devices



Source, March 2005
<http://bugzilla.redhat.com/hwcert/>

SuSE:

<http://www.novell.com/certs/certified/>

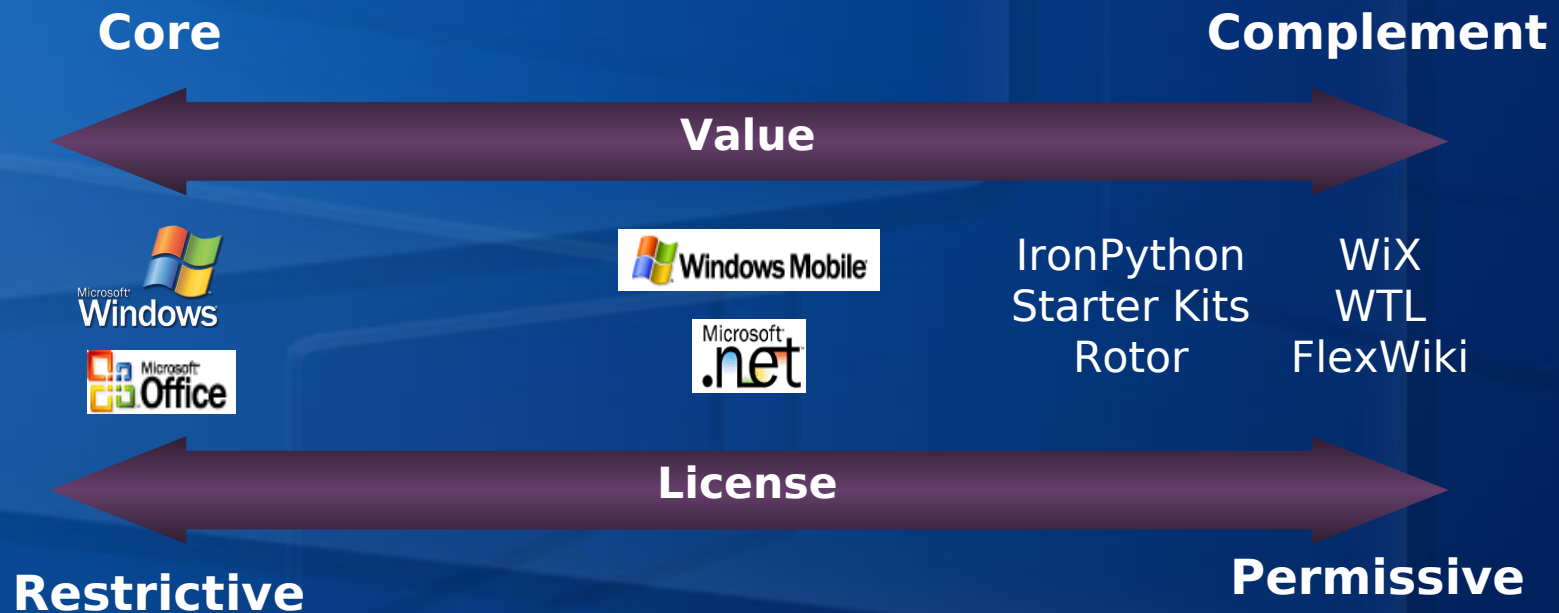
How Can Microsoft Learn From OSS?



- **Must balance modularity or integration costs soar**
- **Increased community involvement is a benefit**
- **Transparency increases trust**

Shared Source Initiative

- **Microsoft** is sharing source code globally
- >70 offerings, >1,500,000 developers, >60 countries
- 99% of programs allow modifications and distribution rights



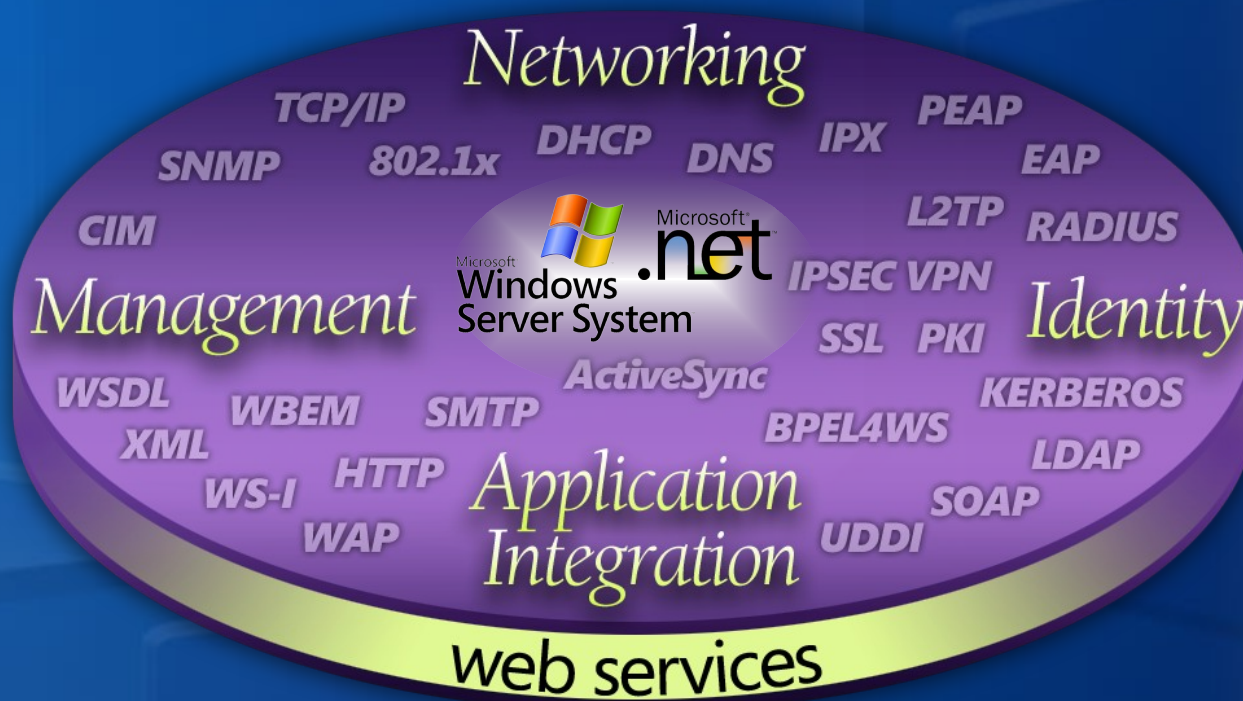
Windows Installer XML

SSI Case Study

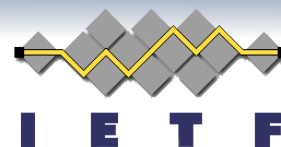
- Open source licensed code
 - Common Public License
- Posted to SourceForge
 - Top 3% most active project since posting
- Community is consuming as free utility and contributing to project
 - MySQL, Sleepycat, enterprise projects...
- Key learnings:
 - Community doesn't "just happen"
 - Require strong leadership and ongoing attention
 - Serve a specific need – don't just dump code

www.sourceforge.net/projects/wix

Committed To Open Standards & Interoperability



Actively participating with standards bodies:



www.w3c.org

www.ieee.org www.oasis-open.org www.ietf.org

www.ws-i.org

What do customers want?

- Value for money
- Risk mitigation
- Investment protection
- Predictability
- Vendor responsiveness
- Ease of use

Tested Hardware

Tested Software

Support Contracts

**Backwards
Compatibility**

Indemnification

Future Roadmap

**Services
Ecosystem**

**Software
Ecosystem**

Commercial Use Requirements

What do vendors want?

- Return on investment
- Complexity reduction
- Quality control
- Customer satisfaction

demo

monad

Questions

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Community Resources

- Microsoft Community Resources
<http://www.microsoft.com/communities/default.mspix>
- Non-Microsoft Community Resources
<http://www.microsoft.com/communities/related/default.mspix>
- Newsgroups
Converse online with Microsoft Newsgroups, including Worldwide
<http://www.microsoft.com/communities/newsgroups/default.mspix>
- User Groups
Meet and learn with your peers
<http://www.microsoft.com/communities/usergroups/default.mspix>
- Attend a free chat
<http://www.microsoft.com/communities/chats/default.mspix>
- Attend a free web cast
<http://www.microsoft.com/usa/webcasts/default.asp>
- Most Valuable Professional (MVP)
<http://mvp.support.microsoft.com/>

Microsoft Learning Resources:

Get ready for Microsoft Visual Studio 2005 and Microsoft SQL Server 2005 with free Assessments and E-Learning, and a chance to win a laptop, GPS, and more

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